1: Glacken E-5 (1951-1952) 1953 AC7 Okinawa AC7

Since the war, the old narrow one lane roads have been broadened, permitting heavier auto traffic. Land ownership has been undisturbed, for it is not in an area in which the military has required land. Since the war, the villagers have tried to return to their former way of life, but this has been done with poorer houses and fewer possessions.

3

Minatogawa

Minatogawa, the second village studied, formerly was a shoe string type of settlement. Houses, shops, drinking places were along the seawall road. This pattern is now altered as a result of the war. Scattered areas have been relocated and houses built on lands formerly used for sweet potatoes. It is now an indeterminate type of village, retaining some indications of its old settlement pattern along the main road, with additions of clusters of houses in the newly settled areas.

Like Hanashiro, this village is in Gushichan township, and located on Highway 64. It is directly on the main historical road, previously mentioned, which led from Naha to the Chinen peninsula. The road, along which its houses are built, parallels for a distance the estuary of the small Minatogawa river. This narrow estuary, called Usaregawa, which connects the river mouth with the Pacific Ocean, and the small river itself (Yuhigawa) is a boundary between Gushichan and Tamagusuku townships. On either side there are steep cliffs, the sites of the best known stone quarries of Okinawa.

The settlement and the adjoining lands have an area of about 256 acres. It is a mixed economy village with three distinct occupational groups: fishermen, stonecutters, and farmers. There is a second village whose borders blend with those of Minatogawa. These two villages are now known officially as Minatogawa-ikku and Minatogawa-niku. The two terms can be awkwardly translated as Minatogawa first ward, and Minatogawa second ward. But popularly they retain their older names: Minatogawa for the fishing village, and Nagamo for the agricultural second ward. These two separate but adjoining villages were until 1925 a single village.

The division was the result of distinct differences in outlook and occupation between the two sections. Minatogawa is a fishing village and has strong ties with Itoman, a town on the East China Sea shore about 4 1/2 miles away. Nagamo is an agricultural community originally settled from Naha and Shuri. Stone-cutting operations spread over both areas. While the fishing village of Minatogawa was given the emphasis in this study, it will be necessary occasionally to include Nagamo in the discussion.[8]

8 The writer did not realize until he lived here that two villages were involved, thinking that the two wards referred to a single administrative unit. By this time the work on Hanashiro had been well started, and time did not permit the intensive study of Nagamo.

sandstone one sees in the new buildings of Naha often is from the quarries of this area. Stone quarries are scattered in various parts of Okinawa, but the Hinatogawa stone is considered the best.

Sandstone quarrying started, according to older settlers, about sixty years ago. Cutting began on the coast, gradually working up slope over rolling stony land. It is an interesting example of the transformation of a landscape by man. Now with the old methods still in use, the cutting has extended beyond the village. Stonecutting operations in the main are in the steep bluffs around both villages, although there are numerous cuttings in the newer settlements of Hinatogawa and along the seashore. Frequently the cut stone blocks lie near the temporary Hinatogawa tombs which dot the rocky coast. By the simplest methods, large quantities of stone have been and continue to be removed. All work is done by hand; machinery was installed by the Americans after the war, but it is out of working order and stands idle.

Before the war, stonecutting in this vicinity was a more thriving industry than now. Quarries are also found in neighboring Tamagusuku township and there is a distributing outlet in Horikawa, the village across the river. Before the war from 300-500 men are said to have engaged in stonecutting. Now there are about 120 in both villages. Many of these stone workers had come from other parts of Okinawa and the Ryukyus: men from the offshore islands, Ie-shima, the Kerama chain, and Iheya, and on the south east, from Kudaka, Tsuken, and Hoanza islands. Most of these settlers from the offshore islands have left. A few, born on Ie-shima, or from the northern district still remain.

Since the war coastwise shipping of lumber and firewood from the north and stone from the south had declined sharply. Trucks have largely displaced the boats. Transport costs are high and the stone is in demand in closer markets.

2

Acquiring and Working the Land

Customary practices govern the quarrying of stone. These eliminate the need for written agreements. Interested persons know the properties and the possibilities of each site. These customary practices are concerned with the acquisition, the working and the restoration of land. Techniques for working the stone have remained nearly the same for at least sixty years.

The stonecutter purchases rights to the stone, not the land itself. When the stone has been extracted, the land is returned to its owner. This is unimproved land, but after the stone has been quarried, a house may be built on the site. When a stonecutter (sekko) wishes to acquire a certain holding, he calls on the owner of the land. Following oral negotiations, the price is agreed upon. A good price

316 425 435 (1951-52) is from Y300-400 per tsubo (about four square yards), much higher than ordinary agricultural land. The price varies with supposed quality. The good judgment of the purchaser is necessary for success. He must estimate the quantity of stone, its depth, whether there may be cracks, fissures, or black streaks below, and the effect of underground water as he cuts down deeper. In a year, a good stonecutter can remove stone from about four tsubo of land. If he has extra capital, he may hire help.

316 472 The types of employment found are either the single operator or the small operator who has one or more employees. The industry is not notable for large capital outlays, or many employees of a single operator. A simple partnership is common. There may be some division of labor, with the owner of the rights doing all the cutting, while a friend or relative who does this as a secondary occupation assists in the removal of the stone and in loading it on a horse cart. The operator who has a piece of land too large to work by himself may hire someone. The employee (yatoi in Japanese, ninpu in Okinawan) is paid according to skill: Y100 [965] a day for a beginning 17 or 18 year old boy, Y150 to the experienced, and Y200 to the worker who can do all phases of the work quickly and skillfully.

Much depends on the nature of the stone being worked. This varies [804] by locality and with moisture content. It will require 8 hours for a man to cut a six shaku (about six feet) length of hard rock 1 shaku [461] 2 sun (14.4 inches) deep, but he may be able to make three cuttings of moist or wet rock in the same period. Working time naturally varies with the strength and skill of the cutter. For this reason, piece [965] work payment is common. The employee, however, may work unused portions of the holdings, receiving two-thirds of the value of the stone cut.

3

Tools and Types of Stone Cut

413 Six tools are used in cutting and extracting the sandstone: (1) the hichi (Okinawan). This tool, about six feet long, resembles a crow bar, but has a sharp chisel edge for cutting the stone. (2) A sharp hand axe (ono in Japanese, yūki in Okinawan) for chipping and finishing, (3) the ishiyūki, a smaller axe, used like the yūki, for chipping and finishing but principally in shaping pyramidal stones (kenchi). The tool is also used to knock off the rough edges of the stone, where it has been split, an operation often performed by old men. (4) The kusukacha (Okinawan). This reminds one of a small light golf iron. It has a handle four or five feet long with a metal strip attached at an angle to one end. It is used to rake off chippings and dust that accumulate in the groove while the cut is being made with the long chisel. (5) Wedges (iya in Okinawan), and (6) sledge hammers are used to split off the stone after the cut has been made.

316 Methods of working with these tools are very simple. The surface dirt is cleared away until the stone to be cut is visible and clean.

A cutting line is then drawn over the surface of the stone. The worker straddles the cutting line, lifts the long bar up and down, making the cut along the line to the desired depth. It is slow and tedious work. 316

When the stone has been cut along a length of 6 or 9 feet and to a depth of about 14 inches, small holes along the bottom of the cut are made with a pick. These provide a hold for the wedges. Shavings or pieces of wood are put on either side of the wedges, three of which are used for a 6 foot length. The wedges are then struck seriatim with a sledge hammer and the stone is cracked across the bottom. When cracked, it is pried loose by the long bar, using the wedge as the fulcrum.

The cutting continues all day, or until the desired length and depth is reached for that particular cut. As the top layer is removed, the cutters go down deeper until they reach water, or until the seepage is too great to permit further cutting. Many times they cut 10 or 15 feet below the level of the surrounding land, stopping when the quality of the stone becomes poor. It may be black streaked, cracked, or have large fissures.

The long chisel is a relatively new addition to the tools of stonecutting. About 60 years ago, only the hand axe was used. This made the cut much rougher, compared with the clean cut of the bar chisel. After removal the block is rough on the lower edge. (Fig. 1) With gentle and slow chipping, this rough edge is smoothed off by the hand axe and the stone is ready for use. [413] 324

Three different types of stones are cut: (1) foundation stone (ishiji in Okinawan) used in housebuilding. This is the stone on which the poles supporting the eaves rest. At its base, the stone is about 16 inches square, at the apex about 14 inches, with a height of 9 inches to one foot. (2) Pyramidal stones with a square base (called kenchi both in Japanese and Okinawan). These are made from larger and imperfect cuttings or from odd shaped stones. They are chipped down and finished to the desired size. They are extensively used in breakwaters, and, occasionally in stone fences. When used as a breakwater, the stones are placed with the base toward the water, the apex being shoreward. The interstices may be filled with cement or clay. [333]

The block is the most important cut. It may be any length. When used in building construction, the blocks are generally about 9 feet long, one foot wide, and from 10-12 inches thick. These are called ishibashida (Japanese and Okinawan). In housebuilding stone, the width and the thickness are about the same, from ten inches to one foot on the side. In housebuilding the blocks are laid like bricks, so that joinings are not in the same vertical line. [333] 324

Cutters normally do not use the stone for personal use. More is to be gained by selling. This is done on an individual basis. 432

The truck or horsecart of the buyer comes to the stonecutting area, the blocks are loaded and taken away. Prior to sale, for convenience, stone may be taken from the cutting area. It is loaded on horse carts, the men carrying the heavy blocks by means of ropes looped around the ends of the stone and over poles which in turn rest on the shoulders. A six foot length (1 ken linear measure), one foot wide and about ten inches thick sells for ¥140 (1951-52).

Foot injuries are the chief hazards of this occupation. The toes may be accidentally cut by the long chisel, and there is danger of bruising or crushing by accidentally dropping the block, or by rolling when it is being dislodged. Very hard and calloused hands are the mark of the stonecutter; his hands are especially conspicuous for the hard, raised areas on the pals around the base of the fingers, the result of the constant lifting and pounding of the long chisel. There is also danger to the eyes in flying chips but few use glasses or goggles.

Like some phases of fishing, this work is for the young and the physically mature men. After the middle forties or early fifties, a man no longer does the heavy work and confines himself to lighter chores. The very old and the retired may chip and finish the foundation and the pyramidal stones.

If a cutter is unable to extract all the stone in a plot whose stone he has bought, there are also customary solutions. When the father dies, his son continues the workings and returns the field to the owner. If a stone worker moves to another village when only half the work has been done, he arranges for a friend, relative, or neighbor to take over the remaining part.

4

Restoring the Land

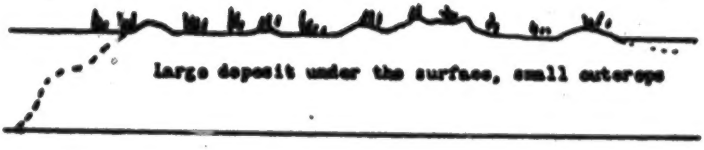
Formerly excavations (which might be 10 or 15 feet deep and the size of a large room) were refilled by the buyer of the stone rights. Rocks, pebbles, and miscellaneous trash were used as fill, but following the war there has been a heavy demand for rock and stone for road construction. As a consequence, many excavations are now only partly refilled. After refilling, houses are built on the sites of formerly excavated land. Here and there one can see sweet potatoes or vegetables growing on land which formerly was covered with stone. The original state of the land, its appearance after excavation and its restoration may be seen in Figure 2. Evidences of this reclamation may be seen throughout the stoneworking area.

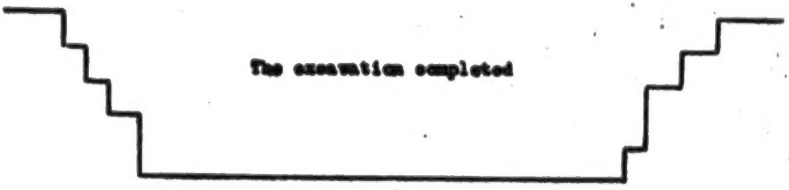
Minatogawa, because it lacks vegetation for protective and decorative purposes, is a good example of the use and adaptation of stone to local needs. There are still stone fences, waist or shoulder height, and many small stone boundary lines, a foot or two and of uneven height. Coral stones, weathered by the sea, honeycombed and pocked, are seen everywhere.

MINATOGAWA-HAGAMO STONECUTTING OPERATIONS

316
311

Fig. 1





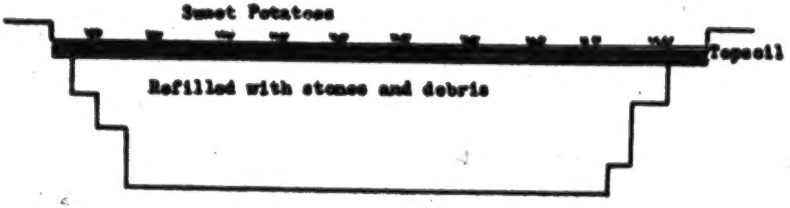


Fig. 2

313 Home Industries and Famous Products The forested northern mountains give rise to small scale lumbering, charcoal making,
314 and firewood gathering. Kunigami-son and Kushi-son emphasize the gathering of
433 bamboo and firewood. On the other hand the making of charcoal is more important in Nago, Hanedji, and Ōgimi. The urbanization of the south combined with
[369] the postwar extension of roads into formerly inaccessible parts of the north
[491] have accelerated exploitation of the northern forest resource. Particularly heavy is the demand for long roof poles, or kichigwā, after every major typhoon.
[237] Kunigami-son and Higashi supply the bulk of these. Where wood is plentiful behind a coastal road, one often finds lime kilns, which process the coral of the reefs.

258 The sea is also a major source of material for home industries. Sea
433 salt is made at Yagaji, Urasoe and Oroku on the west coast, at Henza and Awase
[237] on the east. Kunigami-son prides itself upon its production of seaweed. Buttons from seashells are made in Mawashi. Fish cakes ('kamaboko') are made in quantity in Itoman and Naha, with lesser amounts being produced in Ishikawa and Nago. Dried bonito ('katsuoboshi') is a specialty of Tonaki isle to the west. Motobu-chō holds second place, followed by the western isles of Tokashiki and
505 Zamami. For over a hundred years the small cargo sailboats ('Yambaru-sen')
178 of the east coast have carried forest products from the north. The extension of roads into the northern forests has greatly reduced the amount now carried by sea.

433 Horse breeding is a specialty in Nakazato (the eastern half of Kume-
[232] shima), which has 22% of the gunto's production of horses. However, the pro-
[235] duction of horse and cattle hides is concentrated in the urban areas, which
[231] account for 84% of the hides produced. Nakazato is also famous for production of silk cocoons, being responsible for about two-fifths (38.7%) of the gunto's total. The leading mainland producer is Motobu-chō, with 9%.

[245] Although Okinawa is not self-sufficient in tea, the three areas of
[479] Gushikawa, Ishikawa and Kunigami produce over half of the local tea. In Oku
[277] village of Kunigami, the tea factory is a cooperative venture. Gushikawa
[256] and Chatan pride themselves upon possessing 'sake' and 'awamori' distilleries. Mawashi is the center of production of farm tools, and accounts for some weaving of banana cloth. Weaving of mats from the "seven isles reed" ('shichitō-i') is a local specialty of Kanegusuku.

[314] Travertine quarries are found in Motobu-chō and Katsuren. A sandy limestone is quarried at Minatogawa in Gushichan.